PTO/SB/21 (08-00)

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				Application Nun	nber	09/733,387
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SEP	1	9	2001Applicant(s):
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Donoho et al.

pplication No.:

09/733,387

Filed:

December 7, 2000

Group Art Unit: 1653

Title:

Novel Human Membrane Proteins and

Examiner:

To Be Assigned

Polynucleotides Encoding the Same

Attorney Docket No.: LEX-0104-USA

Assistant Commissioner for Patents Washington, D.C. 20231 Box DD

INFORMATION DISCLOSURE STATEMENT

Dear Sir:

This Information Disclosure Statement is submitted:

X	under 37 CFR 1.97(b), or
	(Within three months of filing national application; or date of entry of international
	application; or before mailing date of first office action on the merits; whichever occurs
	last)
	under 37 CFR 1.97(c) together with either a:
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	a \$240.00 fee under 37 CFR 1.17(p), or
	(After the CFR 1.97(b) time period, but before final action or notice of allowance,
	whichever occurs first)
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	under 37 CFR 1.97(d) together with a:
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Applicant(s) submit herewith Form PTO 1449-Information Disclosure Citation together with copies, of patents, publications or other information of which applicant(s) are aware, which applicant(s) Delieve(s) may be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR 1.56.

SEP 1 9 2001

The delevance of several of the attached references are that they were cited in a communication from a definition patent office in a counterpart foreign application corresponding to the above-identified application.

Applicant submits that the above references taken alone or in combination neither anticipate nor render obvious the present invention. Consideration of the foregoing in relation to this application is respectfully requested.

It is requested that the information disclosed herein be made of record in this application.

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SEP 2 0 2001

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<u>09/17/01</u> Date Respectfully submitted,

Lance K. Shunoto ky

Lance K. Ishimoto

Reg. No. 41,866

DAVID W. HBUR

LEXICON GENETICS INCORPORATED 4000 Research Forest Drive The Woodlands, TX 77381

(281) 863-3333



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Substitute for form 1449A/PTO		Complete if Known
UDFORMATION PLOOR COLUMN	Application Number	09/733,387
A VINEORMATION DISCLOSURE	Filing Date	Nov 7, 2000

TEMENT BY APPLICANT **First Named Inventor** Donoho, Gregory Group Art Unit 1653 **Examiner Name** To Be Assigned Sheet of Attorney Docket Number LEX-0104-USA

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				U.S. PATENT DOCUMEN	TS	A 16
Examiner Initials*	Cite No.¹	U.S. Patent Number	Nind Code ² (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of cited Document MM-DD-YYYY	Pages, Columns Lines Where Relevant Passages or Passyant Figures Appear
-	AA	4,190,496		Rubenstein et al	02/26/80	r iquies Applear
	AB	4,215,051		Schroeder et al	07/29/80	
	AC	4,376,110		David et al	03/08/83	
	AD	4,594,595		Struckman	06/10/86	
	AE	4,631,211		Houghten	12/23/86	
	AF	4,683,202		Mullis	07/28/87	
	AG	4,689,405		Frank et al	08/25/87	
	AH	4,713,326		Dattagupta et al	12/15/87	
	Al	4,873,191		Wagner et al	10/10/89	· · · · · · · · · · · · · · · · · · ·
	AJ	4,946,778		Ladner et al	08/07/90	- M
	AK	5,075,217		Weber	12/24/91	
	AL	5,252,743		Barrett et al	10/12/93	
	AM	5,364,759		Caskey et al.	11/15/94	
	AN	5,424,186		Fodor et al	06/13/95	
	AO	5,445,934		Fodor et al	08/29/95	
	AP	5,459,127		Felgner et al	10/17/95	-
	AQ	5,556,752		Lockhart et al	09/17/96	
	AR	5,625,048		Tsien et al	04/29/97	
	AS	5,700,637		Southern	12/23/97	
	AT	5,744,305		Fodor et al	04/28/98	······································
	AU	5,830,721		Stemmer et al	11/03/98	
	AV	5,837,458		Minshull et al	11/17/98	er e
	AW	5,877,397		Lonberg et al	03/02/99	
	AX	5,948,767		Scheule et al.	09/07/99	
	AY	6,075,181		Kucherlapati et al	06/13/00	
	AZ	6,110,490		Thierry	08/29/00	

			FORE	IGN PATENT DOCUMENTS			
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¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

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	ВВ				n with Convergent Functional Grents", J. Am. Chem. Soc. 111:10	oups, Synthetic and Structural Studies with a 082-1090.				
	вс	Bird et al, 1988,	, "Sing	le-Chain Antigen-Bi	nding Proteins", Science 242:42:	3-426.				
	BD	Bitter et al, 198	7, "Exp	pression and Secret	ion Vectors for Yeast", Methods	in Enzymology 153:516-544.				
	BE			e two-hybrid system . Acad. Sci. USA 88		genes for proteins that interact with a protein				
	BF		arbazo			tes covalently linked to intercalating A) binding", Nucleic Acids Research				
	BG	Gordon, 1989, "	'Trans	genic Animals", Inte	rnational Review of Cytology, 11	5:171-229.				
	вн	Greenspan et a	l, 1993	3, "Idiotypes: structu	re and immunogenicity", FASEB	Journal 7:437-444.				
	ВІ	Gu et al, 1994, Science 265:10			erase β Gene Segment in T Cell	s Using Cell Type-Specific Gene Targeting",				
	BJ	Houghten et al, discovery", Natu			e of synthetic peptide combinato	rial libraries for basic research and drug				
	ВК	Huse et al, 1989 Science 246:12			Combinatorial Library of the Imm	unoglobulin Repertoire in Phage Lambda",				
	BL				f antibody binding sites: Recove ia coli", Proc. Natl. Acad. Sci. US	ry of specific activity in an anti-digoxin single- SA 85:5879-5883.				
	ВМ	Inoue et al, 198 Letters 215(2):3	7, "Sed 27-330	quence-dependent h D.	nydrolysis of RNA using modified	d oligonucleotide splints and R Nase H", FEBS				
	BN	Inoue et al, 198 Acids Research			ation studies on two complement	tary nona(2'-O-methyl)ribonucleotides", Nucleid				
	во	inouye & Inouye 3110.	9, 1985	i, "Up-promoter mut	ations in the lpp gene of Escheri	chia coli", Nucleic Acids Research 13(9):3101-				
	BP	Janknecht et al, 1991, "Rapid and efficient purification of native histidine-tagged protein expressed by recombinant vaccinia virus", PNAS 88:8972-8976.								
	BQ	Kohler & Milstei 256:495-497.	n, 197	5, "Continuous cultu	res of fused cells secreting antib	pody of predefined specificity", Nature				
	BR	Larhammar D. e Discovery 9:179			Revolution-Mutiplicity of G-Prot	ein Coupled Receptors", Drug Design and				
	BS	Lakso et al, 199 Sci. USA 89:623			tivation by site-specific recombir	nation in transgenic mice", Proc. Natl. Acad.				
	вт	Lam et al, 1991,	"A ne	w type of synthetic p	peptide library for identifying ligar	nd-binding activity", Nature 354:82-86.	\prod			
	BU	Lavitrano et al, 1 Cell 57:717-723		Sperm Cells ad Ved	ctors for Introducing Froeign DN/	A into Eggs: Genetic Transformation of Mice",				
	BV	Lee N.H. et al, 1 XP000677175	993, "	Molecular Biology o	G-Coupled Receptors", Drug N	ews and Perspectives 6(7):488-497,				
	BW			omated site-directed Soc. Lond. B 236:14		nolecular templates in primary structure				
	вх	Lo, 1983, "Trans Cell. Biology 3(1			Microinjection of DNA: Multiple	Integrations without Tandem Insertions", Mol.	&			
-	BY	Logan et al, 198 Acad. Sci. USA			ader sequence enhances transla	ation of mRNAs late after infection", Proc. Natl.				

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Filing Date	Nov 7, 2000	
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<u> </u>	C/	<u>` "</u>	vickiniay et al,	1989, '	Rational Design of A	ntiviral Agents", Annu. Rev. Ph	armacol, Toxicol, 29:111-123		+
	CE	, ,	vilyajima et al, 1 cerevisiae: mut	1986, " agene	Expression of murine sis of the potential gly	and human granulocyte-macro cosylation sites", The EMBO J	phage colony-stimulating fac	ctors in S.	+
	CC	, c	Morrison et al, 1 Iomains", Proc.	984, " Natl. <i>i</i>	Chimeric human antil Acad. Sci. USA 81:68	oody molecules: Mouse antigen 51-6855.	-binding domains with huma		+
	CD) N	lulligan & Berg hosphoribosylt	, 1981 ransfe	, "Selection for anima rase", Proc. Natl. Aca	I cells that express the Escherid. Sci. USA 78(4):2072-2076.	chia coli gene coding for xan	thine-guanine	+
<u> </u>	CE	^	leuberger et al,	1984,	"Recombinant antibo	dies possessing novel effector	functions". Nature 312:604-6		┼—
<u></u>	CF		ilsonoff, 1991, '	'Idiotyr	pes: Concepts and Ap	plications", J. of Immunology 1	47:2429-2438		╁
	CG	e.	PHare et al, 198 expressing a pro	31, "Tr karyot	ansformation of mous ic dihydrofolate reduc	se fibroblasts to methotrexate retase", Proc. Natl. Acad. Sci. US	esistance by a recombinant p		†-
	СН	١P	ιαττ, Κ.Α. et al. ˈ	1994. '	'Independent Regulat	ion of Adipose Tissue-specifici of Biological Chemistry 269(46)		the Adipsin	\vdash
	CI	R	ipka, 1988, "Co	mpute	rs picture the perfect	drug", New Scientist 16:54-57.			├-
	C1	R	uther et al, 198	3, "Eas	sy identification of cD	NA clones", EMBO Journal 2(1	0):1791-1794		├
	СК	S	anterre et al, 19	84, "E	xpression of prokaryols", Gene 30:147-156	tic genes for hygromygin B. and	G418 resistance as domina	ant-selection	
L	CL	Sá m	arin et al, 1988, ethylphosphona	"Inhib ates", f	ition of acquired immo Proc. Natl. Acad. Sci.	unodeficiency syndrome virus b USA 85:7448-7451.	y oligodeoxynucleoside		
	СМ	Sr	nith et al. 1983.	"Mole	cular Engineering of yhedrin Gene", J. Vin	the Autographe self-	ear Polyhedrosis Virus Gend	ome: Deletion	
	CN	Sc	ngyang et al, 1	993, "	SH2 Domains Recogn	nize Specific Phosphopeptide S	equences". Cell 72:767-778		\dashv
	co	Ste	ein et al, 1988, (8):3209-3221.	"Physi	ochemical properties	of phosphorothioate oligodeoxy	nucleotides", Nucleic Acids	Research	ㅓ
	CP	Sz Bio	ybalska & Szyb ochemical Trait	alski, ', Proc	1962, "Genetics of Hi . Natl. Acad. Sci. US	uman Cell Lines, IV. DNA-Media A 48:2026-2034.	ated Heritable Transformatio	n of a	\dashv
	ca	Ta cor	keda et al, 1989 Instant region se	5, "Cor equenc	nstruction of chimaerices", Nature 314:452-	c processed immunoglobulin ge			\dashv
	CR	The	ompson et al, 1 Embryonic Sten	989, "(n Cells	Germ Line Transmiss ", Cell 56:313-321.	ion and Expression of a Correc	ted HPRT Gene Produced b	y Gene Targeting	-
	cs	Var		al, 19		of genes into the mouse germ			\dashv
	СТ	Var 264	n Heeke et al, 1 (10):5503-5509	989, " 9.	Expression of Human	Asparagine Synthetase in Esc	herichia coli", J. Biol. Chemis	stry	\dashv
	CU	Vol	ler et al, 1978, '	'Enzyn	ne immunoassays wit	h special reference to ELISA te	Chniques" Clinical Bath-I		4
	cv	լvva	rd et al, 1989, " ', Nature 341:5	Bindin	Q activities of a reper	toire of single immunoglobulin v	ariable domains secreted fro	om Escherichia	\dashv
	CW	Wig	ler et al, 1977,	"Trans	fer of Purified Herpe	s Virus Thymidine Kinase Gene	to Cultured Moune Colles C	Nall 44 000 000	4
	СХ	wig	ler et al, 1980, 77(6):3567-35	"I rans	formation of mamma	lian cells with an amplifiable do	minant-acting gene", Proc. N	latl. Acad. Sci.	\dashv
	CY	DA1 chro	ABASE EMBL mosome 16 clo	'Onlin	e! Ebi,hinxton; AC01 11-405f3" XP0021705	8552, 16 December 1999, JOI 91	NT GENOME INSTITUTE: "P	nomo sapiens	-
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Application Number 99/733,387

Filing Date Nov 7, 2000

First Named Inventor Donobe, Gregory

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First Named Inventor	Donoho, Gregory
Group Art Unit	1653
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	DA	DATABASE EMBL 'Online! ebi; BE241639, 20 July 2000, WEI Y. ET AL: "TCAAP1E0686 Pediatric acute meylogenous leukemia cell (FAB M1)" XP002170593	
	DB	DATABASE EMBL 'Online! EBI; BF183209, 2 November 2000, STRASBERG R.: "601809910F1 NIH_MGC_18 HOMO SAPIENCE CLONE" XP002170594	
	DC	DATABASE EMBL 'Online! EBI; AF249738, 28 June 2000, SLECKMAN B.P. ET AL: "mus musculus Pb99 GENE SEQU XP002170595	ENG
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